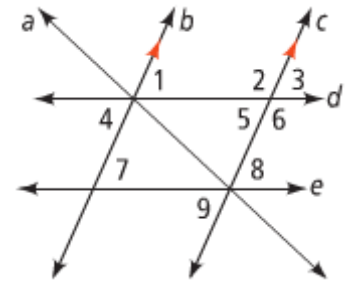


Show all set up and work to earn full points.

For problems 1-4, use the diagram to the right to:

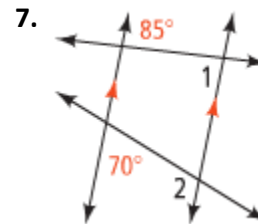
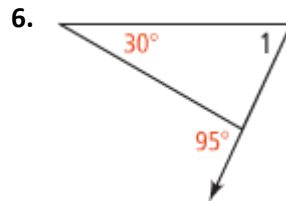
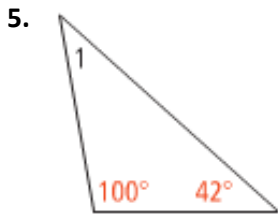


A) Identify one set of each angle type, and

B) Name the lines and transversal.

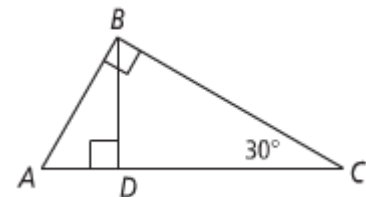
- | | |
|------------------------------|------------------------------|
| 1. Corresponding angles | 2. Alternate Interior angles |
| 3. Same-side Interior angles | 4. Alternate Exterior angles |

For problems 5-7, find $m\angle 1$ and $m\angle 2$

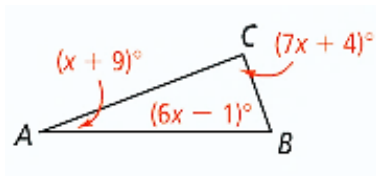


Use the diagram at the right to complete problems 8-11. Justify your answer.

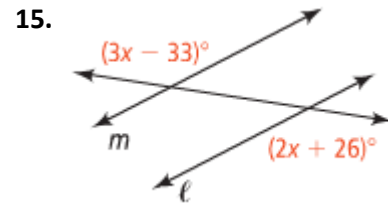
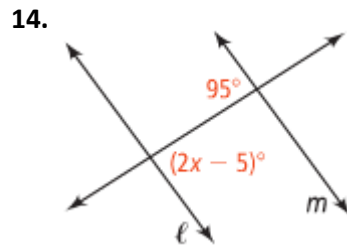
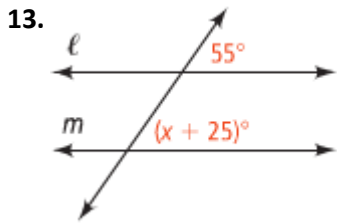
- | | |
|-------------------|-------------------|
| 8. $m\angle CDB$ | 9. $m\angle CBD$ |
| 10. $m\angle BAD$ | 11. $m\angle ADB$ |



12. Solve for x and determine the measure of each angle.



For problems 13-15, $l \parallel m$, name the relationship between the angles, and solve for x .



16. Determine the slope of \overrightarrow{AB} , where $A(-8,3)$ and $B(1,2)$

17. Write the equation of the line perpendicular to $y = -2x - 8$ through the point $P(-8,4)$

18. Write the equation of the line parallel to $y = -\frac{3}{2}x - 4$ through the point $R(-6,2)$

For problems 19-21, determine whether \overrightarrow{AB} and \overrightarrow{CD} are parallel, perpendicular, or neither.

19. $A(-1, -4), B(2,11)$

20. $A(-3,3), B(0,2)$

$C(1,1), D(4,10)$

$C(1,3), D(-2, -6)$

21. Explain, step-by-step, how to construct a set of parallel lines.